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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,512	12/18/2001	Jamal Seyed-Yagoobi	W-W Case 51	4597

7590 03/11/2005

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EXAMINER

LEO, LEONARD R

ART UNIT PAPER NUMBER

3753

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/023,512

Applicant(s)

SEYED-YAGOOBI ET AL.

Examiner

Leonard R. Leo

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 4-10, 12, 15, 19-22, 27-33, 35, 38, 42-45 and 49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11, 13, 14, 16-18, 24-26, 34, 36, 37, 39-41, 47 and 48 is/are rejected.
- 7) ☒ Claim(s) 23 and 46 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/20/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 20, 2004 has been entered.

Claims 1-49 are pending, and claims 4-10, 12, 15, 19-22, 27-33, 35, 38, 42-45 and 49 remain withdrawn.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 11, 13-14, 24-26, 34, 36-37 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seyed-Yagoobi et al in view of Itoh et al.

Seyed-Yagoobi et al discloses all the claimed limitations except surface alterations.

Itoh et al discloses an EHD pumping device comprising an AC voltage source 9 and a cylindrical transfer member 4 (column 7, line 64 to column 8, line 2) with electrical conductor 1 disposed in a recess and coplanar to the transfer member outer surface (Figure 8) for the purpose of minimizing obstruction with the motive particles along the transfer member surface.

Art Unit: 3753

Since Seyed-Yagoobi et al and Itoh et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Itoh et al would have been recognized in the pertinent art of Seyed-Yagoobi et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Seyed-Yagoobi et al the electrical conductor disposed in a recess and coplanar to the transfer member outer surface for the purpose of minimizing obstruction with the motive particles along the transfer member surface as recognized by Itoh et al.

Regarding claims 13-14, Itoh et al discloses the electrical conductor (i.e. insulated in Seyed-Yagoobi et al) may be any shape, i.e. rectangle or square (column 6, lines 26-30). In the combination, the insulated electrical conductor would be recessed and coplanar with the outer surface of the transfer member.

Regarding claim 24, Figure 1 of Seyed-Yagoobi et al discloses plural heat transfer members 18.

Regarding claims 36-37, the claims are rejected as applied to claims 13-14 above.

Regarding claims 47 and 48, the claims are met by the combination of references, since the scope is broader than claims 1 and 24, respectively.

Claims 16-18 and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seyed-Yagoobi et al in view of Itoh et al as applied to claims 1-3, 11, 13-14, 24-26, 34, 36-37 and 47-48 above, and further in view of Knight.

The combined teachings of Seyed-Yagoobi et al and Itoh et al lacks plural groups of electrical conductors.

Art Unit: 3753

Knight discloses an EHD pumping device comprising an AC voltage source 24 and a cylindrical transfer member 12 and a plurality of electrical conductors 40 disposed in plural groups 36 spaced along the transfer member for the purpose of providing pulsatile flow.

Since Seyed-Yagoobi et al and Knight are both from the same field of endeavor and/or analogous art, the purpose disclosed by Knight would have been recognized in the pertinent art of Seyed-Yagoobi et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Seyed-Yagoobi et al plural groups of electrical conductors spaced along the transfer member for the purpose of providing pulsatile flow as recognized by Knight.

#### ***Allowable Subject Matter***

Claims 23 and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

The rejection of claim 48 under 35 U.S.C. 112, second paragraph, is withdrawn in view of the amendment.

Applicant's arguments have been fully considered but they are not persuasive.

The Examiner agrees the combination of references does not *anticipate* the claimed invention. However, the claims have been rejected under 35 USC 103.

The Examiner agrees with applicants' characterization of Seyed-Yagoobi et al.

Regarding applicants' remarks with respect to Itoh et al, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). The disclosure of EHD pumping in Itoh et al is pertinent to the instant invention. One of ordinary skill in the art would employ in Seyed-Yagoobi et al the electrical conductor disposed in a recess and coplanar to the transfer member outer surface for the purpose of minimizing obstruction with the motive particles along the transfer member surface in an EHD pump.

The Examiner agrees layer 4 is disclosed as an "insulator" in Itoh et al. However, it is clear to one of ordinary skill in the art of EHD pumps that the material is an *electrical* insulator, such that the electrodes will be electrically isolated from one another and not cause a short circuit. Itoh et al (column 6, lines 41-42) discloses the insulator layer 4 is an epoxy resin material. The Examiner believes any material is thermally conductive to an extent. As evidenced by Arai et al (column 2, lines 25-32), Vlegaar et al (column 2, lines 4-42, at line 37), Grehier et al (column 13, lines 26-27), and Cesaroni (column 6, line 67 to column 7, line 7), epoxy resin is a well known material employed in heat exchange walls. Arguendo, the secondary reference of Itoh et al is relied upon to teach embedding the electrodes within a recess in the wall.

Regarding applicants' remarks with respect to Knight, the secondary reference teaches one of ordinary skill in the art to employ in Seyed-Yagoobi et al plural groups of electrical

Art Unit: 3753

conductors spaced along the transfer member for the purpose of providing pulsatile flow in an EHD pump.

In conclusion, applicants have argued against the references individually. However, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicants are reminded that the primary reference of Seyed-Yagoobi et al discloses all the claimed limitations, except recessed electrodes which is clearly taught by Itoh et al, and plural groups of electrical conductors which is clearly taught by Knight. The secondary references are not relied upon to teach features already disclosed by the primary reference.

### ***Conclusion***

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

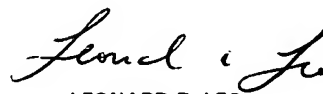
Art Unit: 3753

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

  
LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3753

March 8, 2005